Application No. 09/983,067 Amendment dated August 15, 2005

Reply to Office Action of May 25, 2005

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A process for producing a peptide or a peptide derivative by

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using a reaction system of transcribing a DNA into an RNA and then translating the RNA

produced or a reaction system of translating an RNA in vitro wherein at least one more than one

protein component of the reaction system is labeled with a first substance which adheres to a

second substance, and said second substance is used as an adsorbent for capturing said labeled

protein components after translating.

2. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein a plural number of combinations of said first and second substances

are used in the process.

3. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein the protein components labeled with the first substances are a part or

all of factors and enzymes for the transcription or translation reaction.

4. (Original) The process for producing a peptide or a peptide derivative as claimed in

claim 3, wherein said factors and enzymes for the transcription or translation reaction are

selected from the group consisting of initiation factors, elongation factors, termination factors,

aminoacyl-tRNA synthetase, methionyl-tRNA transformylase and RNA polymerase.

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5. (Previously Presented) The process for producing a peptide or a peptide derivative as

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claimed in claim 1, wherein the protein components labeled with the first substances are the

factors and enzymes for the transcription or translation reaction and other enzymes required in

the constitution of the reaction system.

6. (Original) The process for producing a peptide or a peptide derivative as claimed in

claim 5, wherein said enzymes required in the constitution of the reaction system other than the

factors and enzymes for the transcription or translation reaction are selected from the group

consisting of enzymes for regenerating energy in the reaction system and enzymes for

hydrolyzing inorganic pyrophosphoric acid formed during the transcription or translation

reaction.

7. (Original) The process for producing a peptide or a peptide derivative as claimed in

claim 1, wherein the reaction system for transcribing a DNA into an RNA and then translating

the RNA produced or the reaction system translating an RNA in vitro is free from termination

factors.

8. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein a pair of said first and second substances adhering to each other are

substances mutually interacting in affinity chromatography.

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9. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 8, wherein the combination of said first and second substances mutually

interacting in affinity chromatography is selected from among combinations of substances

capable of forming a bond between a protein or a peptide fragment and a metal ion, a bond

between an antigen and an antibody, a bond between a protein and a protein or a peptide

fragment, a bond between a protein and a specific low-molecular weight compound selected

from the group consisting of amino acids, DNAs, dyes, vitamins and lectins, a bond between a

protein and a saccharide, or a bond between a protein or a peptide fragment and an ion exchange

resin.

10. (Currently Amended) The process for producing a peptide or a peptide derivative as

claimed in claim 9, wherein said combination of first and second substances forming a bond

between a protein or a peptide fragment and a metal ion is a histidine tag and a nickel complex or

a cobalt complex.

11. (Previously Presented) The process for producing a peptide or a peptide derivative as

claimed in claim 1, wherein said combination of first and second substances is selected from the

substances magnetically adhering to each other.

12. (Currently Amended) A kit of protein components for a reaction system for producing

a peptide or a peptide derivative by transcribing a DNA into an RNA and then translating the

RNA produced or translating an RNA in vitro wherein the kit comprises at least one more than

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one protein component of the reaction system which is labeled with a first substance which

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adheres to a second substance which is used as an adsorbent for capturing said labeled protein

components after translating and that said protein component is selected from the group

consisting of enzymes and factors constituting the reaction system.

13. (Original) The kit of protein components as claimed in claim 12, wherein said protein

components are selected from the factors and enzymes for the transcription or translation

reaction and other enzymes required in the constitution of the reaction system.

14. (Original) The kit of protein components as claimed in claim 13, wherein said factors

and enzymes for the transcription or translation reaction are selected from the group consisting of

initiation factors, elongation factors, termination factors, aminoacyl-tRNA synthetase,

methionyl-tRNA transformylase and RNA polymerase.

15. (Original) The kit of protein components as claimed in claim 13, wherein said

enzymes required in the constitution of the reaction system other than the factors and enzymes

for the transcription or translation reaction are selected from the group consisting of enzymes for

regenerating energy in the reaction system and enzymes for hydrolyzing inorganic

pyrophosphoric acid formed during the transcription or translation reaction.

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16. (Previously Presented) The kit of protein components as claimed in claim 12 which

comprises an adsorbent as said second substance for capturing the protein components labeled

with said first substance.

17. (Currently Amended) The kit of protein components as claimed in claim 12 which

comprises a plural number of combinations of said first substance for labeling at least one more

than one protein component constituting the reaction system with said second substance used as

an adsorbent for capturing the labeled protein components.

18. (Canceled).

19. (New) The process for producing a peptide or a peptide derivative as claimed in claim

1, wherein all protein components of the reaction system are labeled with said first substance.

20. (New) The kit of protein components as claimed in claim 12, wherein all protein

components of the reaction system are labeled with said first substance.